

What is claimed is:

1. A system for converging networks, comprising at least one resource manager (RM) which provides routing information from a network node to a signal transfer point (STP) in a network and establishes a bearer path over a packet network.
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2. The system of claim 1, wherein the at least one RM monitors messages for the routing information associated with a call from the network node and based on an entry in a routing database corresponding to the routing information, routes the call over the packet network and establishes the bearer path.
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3. The system of claim 1, further comprising a media gateway (MG) between the packet network and the network node under control of the at least one RM.
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4. The system of claim 3, wherein the MG assists in establishing the bearer path under control of the at least one RM.
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5. The system of claim 3, further comprising another network node, wherein the MG provides controls to establish the bearer path between the network node and the another network node.
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6. The system of claim 5, wherein the another network node is one of a soft switch and a time division multiplexing switch (TDM).
7. The system of claim 5, wherein the another network node is a soft switch and the at least one RM converts Integrated Services Digital Network User Part (ISUP) messages to bearer independent call control (BICC) messages and converts BICC messages to ISUP messages.
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8. The system of claim 1, wherein the at least one RM coordinates processing of time division multiplexing (TDM) connections and packet connections to create the bearer path.
- 5 9. The system of claim 8, wherein the at least one RM establishes, monitors and releases, in any combination, the bearer path.
- 10 10. The system of claim 1, wherein the at least one RM is at least two RMs establishing a bearer path over the packet network between the network node and another network node.
- 15 11. The system of claim 10, wherein the two RMs coordinate processing of time division multiplexing (TDM) connections and packet connections to establish and release the bearer path.
- 20 12. The system of claim 10, further comprising at least two media gateways (MGs) corresponding to the at least two RMs, the at least two MGs interfacing with the network node and the another network node, respectively, and the packet network.
- 25 13. The system of claim 1, wherein the at least one RM determines whether a connection can be established over the packet network based on the routing information.
- 30 14. The system of claim 13, wherein the at least one RM determines whether the routing information corresponds to a pre-determined packet route.
- 35 15. The system of claim 13, further comprising a pre-defined database having the routing information and a corresponding packet route.

16. The system of claim 13, further comprising a database which is dynamically created and the routing information is reconciled to a corresponding packet route as calls are originated and processed.

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17. The system of claim 1, wherein the routing information is one of a directory number and a carrier access code (CAC).

18. The system of claim 1, wherein the at least one RM is a plurality of self learning switches (SLSs).

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19. The system of claim 18, wherein one of the plurality of SLSs provides an identity (ID) Tag to an ISUP message and further propagates the ISUP message and ID Tag over the network.

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20. The system of claim 19, wherein the one of the plurality of SLSs propagates the ISUP message and ID Tag to a second of the plurality of SLSs which then provides another unique ID Tag to the ISUP message and sends a tag seen message including an ID of the second of the plurality of SLSs to the one of the plurality of SLSs.

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21. The system of claim 20, wherein the tag seen message is sent over at least any one of a packet network, a SS7 network, and a wireless network.

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22. The system of claim 20, wherein the second of the plurality of SLSs further propagates the ISUP message with the another unique ID Tag over the network, wherein if another SLS of the plurality of SLSs responds to the ISUP message then the another unique ID Tag is replaced with a new unique ID Tag of the another SLS and propagated over the network and sends another tag seen message to the one of the plurality of SLSs identifying the another SLS.

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23. The system of claim 20, wherein the one of the plurality of SLSs builds a routing entry in a routing database to define one or more routes to at least one of the plurality of SLSs when a final tag seen message is received by the one of
5 the plurality of SLSs.

24. The system of claim 23, wherein the routing entry includes at least any one of an Internet Protocol (IP) address, a directory number, a carrier access code, an SLS address, a
10 name of the B-party, and a network node identifier.

25. A system for routing, comprising at least one resource manager (RM) that monitors Integrated Services Digital Network User Part (ISUP) messages from at least one network node
15 for routing information and reroutes a call across a packet network when the routing information corresponds to a known packet destination.

26. The system of claim 25, wherein the routing information
20 corresponds to data in an entry in a routing database, the data including at least any one of a directory number, a carrier access code, an Internet Protocol (IP) address, a B-party name, an SLS address, and a network node identifier.

25 27. The system of claim 25, further including at least one media gateway in communication with the at least one RM and the packet network.

28. The system of claim 27, wherein the at least one RM coordinates call setup and release among the at least one media
30 gateway and the at least one network node such that the ISUP messages, one or more media gateway commands and one or more packet messages are sequenced to establish and release a bearer path associated with the call.

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29. The system of claim 28, wherein the at least one network node is a soft switch and the at least one RM translates at least one ISUP message to a bearer independent call control (BICC) message and translates at least one BICC message to at least one ISUP message and coordinates with the media gateway so that the at least one BICC message, at least one ISUP message and one or more media gateway commands establish and release the call and bearer path.
30. The system of claim 25, wherein the at least one RM is a self learning switch and further routes the call across a time division multiplexing (TDM) network when the routing information corresponds to an unknown destination and appends a Tag which identifies the at least one RM to the ISUP message for propagation across the TDM network.
31. The system of claim 30, wherein at least one other RM responds to the Tag by sending a tag seen message to the at least one RM and propagates the ISUP message along with new information that identifies the at least one other RM across the TDM network.
32. The system of claim 31, wherein the at least one RM creates one or more routing entries in a routing database corresponding to the destination of any RM that reports the Tag seen message.
33. A method for converging networks, comprising the steps of:
- providing routing information from a network node to a signal transfer point (STP) in a network by at least one resource manager (RM); and
 - establishing a bearer path over a packet network based on the routing information.
34. The method of claim 33, further comprising the steps of:

monitoring the routing information associated with a
call from the network node; and
routing the call and establishing a bearer path over the
packet network when an entry in a routing database corre-
5 sponds to the routing information.

35. The method of claim 33, further comprising establishing
the bearer path between the packet network and the network
node with the RM instructing at least one media gateway to
10 assist in establishing the bearer path.

36. The method of claim 35, further comprising establishing
the bearer path between the network node and another network
node.
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37. The method of claim 36, further comprising the steps of:
converting at least one Integrated Services Digital Network
(ISDN) User Part (ISUP) message to at least one bearer inde-
pendent call control (BICC) message; and
20 converting the at least one BICC message to the at least one
ISUP message.

38. The method of claim 33, wherein the establishing step in-
cludes coordinating processing of time division multiplexing
25 (TDM) connections and packet connections to create and re-
lease the bearer path.

39. The method of claim 33, further comprising determining
whether the routing information corresponds to a pre-
30 determined packet route and the routing information includes
one of a directory number and a carrier access code.

40. The system of claim 33, further comprising the steps of:
adding a Tag to an ISUP message which identifies a crea-
35 tor of the Tag;

propagating the ISUP message with the Tag across the network;

sending a Tag seen message which identifies a sender of the Tag seen message over the packet network; and

5 propagating the ISUP message including the identity of the sender of the Tag seen message across the network.

41. The method of claim 40, further comprising creating at least one routing entry in a routing database when a last Tag
10 seen message is received, the entry defining a route including at least any one of an Internet Protocol address (IP) address, a network node identifier, a RM address, a B-party name, and a media gateway address.

15 42. The method of claim 40, further comprising the step of:
adding a counter to the ISUP message to track the sequence of the Tag seen message; and
incrementing the counter when a Tag seen message is sent.

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43. A computer program product comprising a computer usable medium having readable program code embodied in the medium, the computer program product includes at least one component to:

25 provide routing information from a network node to a signal transfer point (STP) in a network by at least one resource manager (RM); and

establishing a bearer path over a packet network based on the routing information.

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